



October 13, 2022

Washington State Building Code Council
Attention: Tony Doan, Chair
1500 Jefferson St SE
Olympia, WA 98501

RE: Group 2 Code Change Proposals

Dear State Building Code Councilors,

The Spokane Home Builders Association (SHBA) has been committed to protecting and promoting the housing industry since 1947. Serving seven Eastern Washington counties, SHBA has over 750 members that work in the home building industry.

We and the community members listed at the conclusion of this letter have strong objections to eight Group 2 Code Change Proposals to the Washington State Residential Energy Code.

As a community, we urge you to disapprove code change proposals that would increase the cost of new home construction and exacerbate the housing crisis.

Washington state is currently in the midst of a brutal housing crisis. Increasing the cost of new homes through unnecessary building codes will only deepen the housing shortage. Additionally, proposals that claim to reduce greenhouse gas emissions can have the opposite effect and actually increase not only the cost of energy but the amount of energy being used in homes.

Transportation is the greatest contributor to greenhouse gas emissions, accounting for nearly 45 percent of Washington's emissions (Washington State Greenhouse Gas Emissions Inventory: 1990-2018). Adopting building codes that increase the cost of housing will result in even more emissions because workers will have to travel further to find affordable housing.

Let's work together to make housing more affordable and reduce overall emissions.

The Group 2 Code Change Proposals we object to are listed below, along with evidence behind each objection.

1. **21-GP2-073: R406 Table - OPTION 1: heat pumps NOT required vs. OPTION 2: heat pumps required**
 - a. Option 1 is preferred. Not requiring heat pump installation in new homes presents the lowest cost to homeowners, only adding \$15,234 to the cost of building a home. Further, Option 1 preserves energy choice and material flexibility that's important while supply

chains recover from the fallout of the pandemic and the HVAC industry adapts to the new refrigeration standards.

- b. Option 2 is not recommended. This option presents space heating source credits that penalize homes built with secondary heating systems, common in colder climates such as Eastern Washington. This option also presents a de facto ban on natural gas, eliminating energy choice for Washington homeowners.

2. **21-GP2-032: Sealed Air Handler**

- a. Does not allow for the air handler to be placed in a semi-conditioned space. If a house does not have a garage, the air handler would need to be placed in a utility-type closet in the home's conditioned space, not an attic or crawlspace.
 - i. This limits the amount of usable square footage for home buyers since these rooms need to have nine square feet of clearance for proper airflow.

3. **21-GP2-065: Heat Pump Space Heating**

- a. Eighty-four percent of builders report that the upfront cost of heat pumps is the biggest hurdle in building affordable entry-level houses.
- b. Sixty percent of builders report that consumers dislike heat pumps due to high up-front costs.
- c. There is a disconnect between the building code that encourages heat pumps and the planning/zoning codes' setback requirements. The outside compressor location is a challenge with single-family construction. Setback requirements and laws concerning decibel levels at the property line restrict the available locations for the unit. This is not an issue with a gas-fired furnace because they do not have an outside component.
- d. Requiring new homes to have heat pumps for space heating limits energy choice for homeowners and increases the cost of buying a new home. This also leaves homeowners vulnerable to power outages that occur during extreme temperatures.
 - i. While it's true Washington state only has an air conditioning rate of 53 percent, it's directly tied to the average annual cooling degree days—Washington ranks last next to Alaska.
 - ii. The cost of air conditioning is not the limiting factor. Instead, air conditioning adoption is more about when and where average temperatures rise high enough to justify the cost and hassle of installing air conditioning. (Haas School of Business, UC Berkley.)
- e. Eastern Washington will need supplemental heat sources during cold periods; this adds more upfront costs for Eastern Washington homebuyers.
- f. Heat pump systems are severely backlogged due to supply chain disruptions and increased demand due to the 2018 iteration of the energy code.
 - i. This will get worse in 2023 and beyond as the supply chain continues to struggle with meeting increased demand—California is now mandating heat pumps—and changes with refrigerant standards.
- g. Lower life expectancy compared to gas furnaces—five years less according to DOE. Life expectancy for gas furnaces is 20 years and 15 years for heat pumps.
- h. Labor prices are high since the supply of contractors skilled with this equipment is limited.
- i. If a heat pump installation requires a panel upgrade in a single-family home, the cost of the upgrade is substantial enough to move away from the heat pump option.
- j. Consumer complaints:
 - i. Heat pumps are prone to improper installation.
 - ii. Mechanical issues are prominent and expensive to repair. Compressor failure is prominent and the replacement cost is \$1,996.

- iii. Heat pumps don't provide comfort during the heating season—supply air temperature does not feel warm.
- iv. Heat pumps require additional maintenance and not cleaning regularly can create a flourishing environment for mold.
- k. The proposal does not apply to equipment replacements so the burden of energy efficiency falls on new construction only. New construction homes are already highly efficient, making older homes more energy efficient would reduce greenhouse gas emissions at a much higher rate.

4. **21-GP2-066: Heat Pump Water Heating**

- a. Requiring new homes to have heat pump water heaters reduces energy choice and increases the cost of buying a new home. This also leaves homeowners vulnerable to power outages that occur during extreme temperatures.
- b. Plumbers are not accustomed to working with electricity, and this lack of experience may make them hesitant to suggest HPWHs.
- c. Consumers complain that noise from heat pump water heaters is an issue if it's placed in conditioned spaces. Another proposal requires water heaters to be installed in the building's thermal envelope, which does not include garages.
 - i. Complaints also exist for the slow recovery rate so homeowners generally set HPWHs to "hybrid" mode, allowing the electric resistance heating element to operate instead; efficiency is not optimal in this setting and defeats the purpose.
- d. Heat recovery time lags behind tankless water heaters. This isn't suitable for larger families.
- e. The proposal does not apply to equipment replacements that are of the same size so the burden of energy efficiency once again falls on new construction and upsizing of equipment only.
- f. HPWHs are a step backward. A giant tank takes up a lot of space and it's losing heat. Consumers will be flabbergasted and push back.

5. **21-GP2-079: U-Factor Replacements**

- a. This would negatively impact housing affordability.
- b. Removes an option from R406 for credit. Builders should be able to choose lower U-factor windows (many already do when budget allows) but code should not mandate a lower U-value.
- c. Further reduces the number of windows available for builders to install in new homes, potentially increasing sourcing challenges facing builders—further delaying bringing further driving costs and delaying bringing housing to market.
- d. For instance, builders report existing energy code-compliant windows (0.30) are on backorder for 3+ months.
- e. Windows are already extremely efficient. Currently, Energy Star and the U.S. Department of Energy recommend windows equal to or less than 0.30 for prescriptive compliance.
- f. Proponents state that it will take 23-31 years to achieve a simple payback. According to the National Association of Realtors, Washington homeowners only stay in their homes an average of 10 years. Therefore, upfront costs are not a valid investment for the average homeowner.

6. **21-GP2-080: Water Heater Install Location**

- a. This is a design standard that will add cost and reduce the flexibility of builders to design a home to consumers' preferences.
- b. The proposal reduces usable square footage in homes, often closet space, and can reduce a home's value.

- c. Tank manufacturers are already increasing insulation levels to reduce standby energy losses if a tank is placed in semi-conditioned spaces like an attic or garage.
- d. Consumers complain that noise from heat pump water heaters is an issue if it's placed within habitable spaces.

7. 21-GP2-089: Allowed Leakage Rates

- a. Builders are already having a difficult time meeting the 5 ACH standard for compliance while watching costs.
- b. Requiring 3 ACH will result in higher costs for home buyers, further reducing the number of families that can afford to buy a house. The proposed change would require more sophisticated and costly ventilation systems.
- c. Harvard School of Public Health recommends a target of 3-4 ACH.

8. 21-GP2-091: Electric Vehicle Supply Equipment

- a. Forty-seven percent of new homes are already being built with EV charging capabilities, with the only exception being in instances where the electrical infrastructure cannot support increased loads and must be upgraded—cost estimates are upwards of \$11,000 per home in a subdivision. This also increases build times, which further drives up housing costs, because working with utility providers on upgrades can cause delays. Spec builders pre-wire at higher rates as well because this is a feature that buyers want.
- b. State Building Code Council lacks the authority to develop this code. There is no legislative mandate to adopt an EV charging requirement in the Residential Code. E2SHB 1287 was passed with a mandate for the council to adopt rules related to R-3 occupancies—which only exist in the International Building Code. The Residential Code does not recognize R-3 occupancy classifications.
 - i. Legislative intent is not sufficient for the adoption of a rule outside of the scope of what was authorized in the passage of E2SHB 1287.
- c. A code of this nature belongs in the Electrical Code—managed by Labor & Industries and not the State Building Code Council—and not the Residential Code.
 - i. Labor & Industries spoke on this issue at the June 17, 2022 meeting: “sizing of circuits is dedicated and determined by equipment being used.” Providing specifications for a branch circuit without knowing the equipment being installed is meaningless.
- d. Enforcement of this code, should it be adopted, would be impossible for most jurisdictions that do not have an electrical building official and/or inspector on staff. Additionally, there is no pointer in the electrical code that helps electrical inspectors know what the requirements are within the IRC.

SBHA and our undersigned members below strongly urge you to consider the ramifications of these code proposals in light of the debilitating housing crisis facing our state. Please do not pass new standards that exacerbate this crisis.

Thank you,

1. Aaron Cermak
2. Aaron DeWitt, Total Energy Management, Inc.
3. Adam Stoneman
4. Ajit Singh, AJ Heating
5. Alexa Amatto, Condron Homes
6. Alexandria Goolie
7. Allen Crites
8. Allen Dykes, Village Homes, LLC
9. Andrew Benado, Greenstone Homes
10. Andrew Jordan
11. Andrew Northrop, Spokane Hardware Supply, Inc
12. Andrew Oss
13. Andy Bleck
14. Angela Napolitano
15. Angela Rehmke
16. Ashton Dunn
17. Barbara Redinger
18. Bart Clark
19. Ben McGerty, Hayden Homes
20. Bethany Hanson
21. Blair Davis
22. Brad Stevens
23. Bradley J. Wendle
24. Bradley Maddox
25. Brandon Crume
26. Brian A. Kelley, Kelley Construction
27. Brian Burrow, Really Clean Energy
28. Brian Isaac
29. Bryan Nenno, Nenno Homes LLC
30. Cary Snow, Snow Development LLC
31. Casey McCormick
32. Chad Swanson
33. Chaunley Terry
34. Chris Hardy, Champion Concrete Pumping, Inc
35. Chris Smallwood, Superior Heating and Air Conditioning
36. Colette Sullivan
37. Colleen Cronkhite, Empire Glass, Inc.
38. Connor Brooks
39. Connor Riedlinger, Hajoca Corp. Spokane
40. Corey Condron, Condron Homes LLC
41. Cornel Ivascu
42. Cory Johnson, Leeco Electric Inc.
43. Cory Luttermoser, Moser Inc.
44. Craig Roberts, Condron Homes LLC
45. Curtis Fritz
46. Dallas Becker, Windermere North Spokane LLC
47. Dan Gale, Reliable Restaurant Repair
48. Dan Pooler
49. Dan Wolf
50. Dan Thompson
51. Daren Everett
52. Dave Beiler
53. David Christensen, Intermountain West Insulation
54. David Mauel, MAKLAV Consulting
55. Debbie King, Advanced Mechanical Systems
56. Debra Reincke, Educator
57. Denise Mai, Windermere Coeur d'Alene Realty Inc
58. Dennis Crapo, DiamondRock
59. Don Campbell
60. Don Gardner, Donaly Marketing
61. Donna Dixon
62. Duane Palmer
63. Duncan Bean, Duncan Bean Architect
64. Dwight Weigelt
65. Elisia Oka, Residential Home Solutions
66. Elvedin Alimanovic
67. Eric Keskitalo, Alderbrook Homes
68. Erika Cook, JJZ Home Design
69. Erin Benson
70. Fred Anderson, Compass Construction
71. Gary Reymers
72. Genette Bustillos, Extreme Drywall Finishes, LLC
73. Guy Miller
74. Harley Porter
75. Harry Tefft
76. Helen Blyton, Cline's Air Conditioning Service, Inc.
77. Jack Jones, J & K Concrete Inc
78. Jacob Tesch
79. James Morgan, Greenstone Homes
80. James Reincke
81. Jason Conley, Advanced Technology Heating and Cooling
82. Jason Flett
83. Jason Roop
84. Jason Wells, Nolan Heating and Air
85. Jazmin Bustillos
86. Jeff Bedard
87. Jeff Kilgore, Kilgore Construction, Inc.
88. Jeffrey Freim
89. Jennifer Chaparro, Rivercrossing, LLC

90. Jennifer Thomas, Spokane Home Builders Association
91. Jerry Hagseth
92. Jerry Klein
93. Jesha Bustillos
94. Jim Breidenbach
95. Jim Kerr, Bunker Steel Buildings Inc
96. Jim Norman, Norman Construction
97. Jim Reincke
98. Joe Frank, Chapman Homes, LLC
99. Joe Garst, Windermere City Group
100. Joe Krels
101. Joel White, Spokane Home Builders Association
102. John Moran
103. Jon Budda
104. Jon Fifield
105. Jon Vanos, Pro Mechanical Services
106. Joy Gunther
107. Julianne Dean
108. Julie Laird, Walls Construction Corp
109. Karl Picken
110. Kellie Henson
111. Kelly M. Graham
112. Kelsey Quick
113. Ken Duncan
114. Keri Jones, J & K Concrete Inc
115. Kevin Davey, Johnstone Supply
116. Kristopher Amsden
117. Kristy Hamby, WindermereWest Plains
118. Kyla Strohte, Exchange Publishing
119. Kyle Fink
120. Kyle Marsh, Kyle Marsh Construction, Inc.
121. Lance Crawford, Avista Utilities
122. Lanzce Douglass
123. Larry Andrews, Andrews Mechanical Inc.
124. Lee Anne Reber
125. Lindsey Hulsizer, Double R Heating & Air
126. Lisa Lembeck, Windermere City Group, LLC
127. Liselotte Butterfield
128. Mack Crane
129. Marc Ellis, M&L Mechanical LLC
130. Marc Tamasonis
131. Matt Berry, Berry Built
132. Matt Dishman
133. Matthew Jacobs
134. Maxim Johnston, Air Control Heating & Electric, Inc.
135. Micah Kuntz, Mandate Properties LLC
136. Michael Frank
137. Michael Knutson
138. Michael Layman, Control Solutions Northwest Inc.
139. Michael Rassier, Coldwell Banker Tomlinson
140. Michelle Fazio
141. Mike Bowcutt, Spokane Coffee Appliance Repair Inc.
142. Mike Dixon
143. Mike Lloyd
144. Nichole Kerns
145. Nick Gilliland
146. Nick Scheel, Untamed Construction LLC
147. Oscar Torres, Design Services NW
148. Peter Carstens
149. Phil Folyer, Morse Western Homes LLC
150. Philip, Quality Stoves & Spas
151. Randy Hastings, R And R Heating
152. Randy Wells, Windermere City Group
153. Rex Hartley
154. Rich Chambliss
155. Richard Rivas
156. Rick Arrigo
157. Rick Napolitano
158. Rick Ramser, Airco Mechanical LLC
159. Robert Churchill, Superior Heating and Air Conditioning
160. Robert Dixon
161. Robert Reed, R&R Heating and Air Conditioning
162. Roger Krieger, City of Deer Park
163. Roland Doggen, Norstar Heating And Cooling Inc.
164. Ron Welch
165. Russel Vuller, NWR, Inc.
166. Ryan Souza
167. Sam Guglielmo, Glacier Supply Group
168. Sandra Teal
169. Sarah Nielsen, Nielsen Contracting and Consulting
170. Scot Hattenburg, M&L Construction Inc.

- 171. Scott Burrington
- 172. Scott Keno
- 173. Sean Sater
- 174. Sharla Jones, Greenstone
- 175. Sheldon Bennett, Southwest
Regional Council of Carpenters
- 176. Steve Perry, The Barton Boys LLC
- 177. Steve Williams, Coldwell Banker
Tomlinson-Spokane
- 178. Tena Risley, Northwest HVAC/R
Association & Training Center
- 179. Thomas Suwanmaneedang, Bulldog
Rooter Inc.
- 180. Thomas Woods
- 181. Tim Fricke, Banner Furnace and
Fuel
- 182. Tina Butori, Control Solutions
Northwest, Inc.
- 183. Tisha Goodman, Rockwood Property
Management
- 184. Titus Hug, Hug Construction
- 185. Todd Overly, Sturm Heating & Air
Conditioning, LLC
- 186. Trace Shea
- 187. Travis Flory
- 188. Travis Howe
- 189. Travis J. Yager
- 190. Trevor Windhorst
- 191. Tristan Twin
- 192. Victor Plese, Plese Realty LLC
- 193. Walter Brennan
- 194. Wayne Dodson
- 195. William Dixon
- 196. Xavier Rehn
- 197. Zach Mogan
- 198. Zachary Lewis